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The 3.9GW new Hsinta [combined-cycle power plant](https://www.nsenergybusiness.com/projects/anegasaki-thermal-power-station-upgrade/) (<https://www.nsenergybusiness.com/projects/anegasaki-thermal-power-station-upgrade/>) will be developed on a 202acre-site adjacent to the existing 2.4GW gas-fired facility in the Yongan district, in Taiwan's southwestern port city of Kaohsiung.

The new Hsinta combined-cycle power plant make-up

The new gas-fired facility will comprise three combined-cycle generating units of 1.3GW capacity each.

Each unit will be equipped with two 7HA.03 gas turbines, one steam turbine, and two heat recovery steam generators (HRSG) from GE.

GE's 7HA.03 gas turbine is a heavy-duty 60Hz gas turbine with a rated simple-cycle output of 430MW. It can deliver a net output of 1,282MW and a net heat rate of 5624kJ/kWh in a 2x1 combined-cycle configuration. It is designed to offer a net efficiency of more than 64% in combined-cycle operation.

The other components of the new facility will include the fuel supply equipment, seawater desalination system, circulating water system, raw water system, switchyards, chimneys, and related auxiliary facilities.

Feed gas supply

The Hsinta combined-cycle power station will receive gas supply through a 36-inch natural gas pipeline from the Yongan LNG receiving station. The estimated LNG requirement of the Hsinta power plant will be approximately 480 tonnes (t) per hour.

Contractors involved with the Hsinta power station upgrade

A consortium of General Electric International and Taiwan-based CTCI Corporation was selected as the main contractor for the engineering, construction, equipment supply, and commissioning of the Hsinta combined-cycle power station in September 2020.

GE will be responsible for the supply of six gas turbines, three steam turbines, six HRSGs, and nine generators for the renewal combined-cycle facility, while the CTCI Corporation's scope of work includes the engineering and civil construction works, the erection of power generating units along with the balance of plant (BOP) works.

The existing Hsinta combined-cycle power plant

The existing Hsinta combined-cycle power plant is equipped with five gas-fired combined-cycle units of 442MW capacity each.

Each unit is equipped with three SGT6-8000H gas turbines with HRSGs and a steam turbine from Siemens.

The existing natural gas-fired units are scheduled for decommissioning during 2026-2027, followed by the decommissioning of the four coal-fired units within the complex during 2023-2026.

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